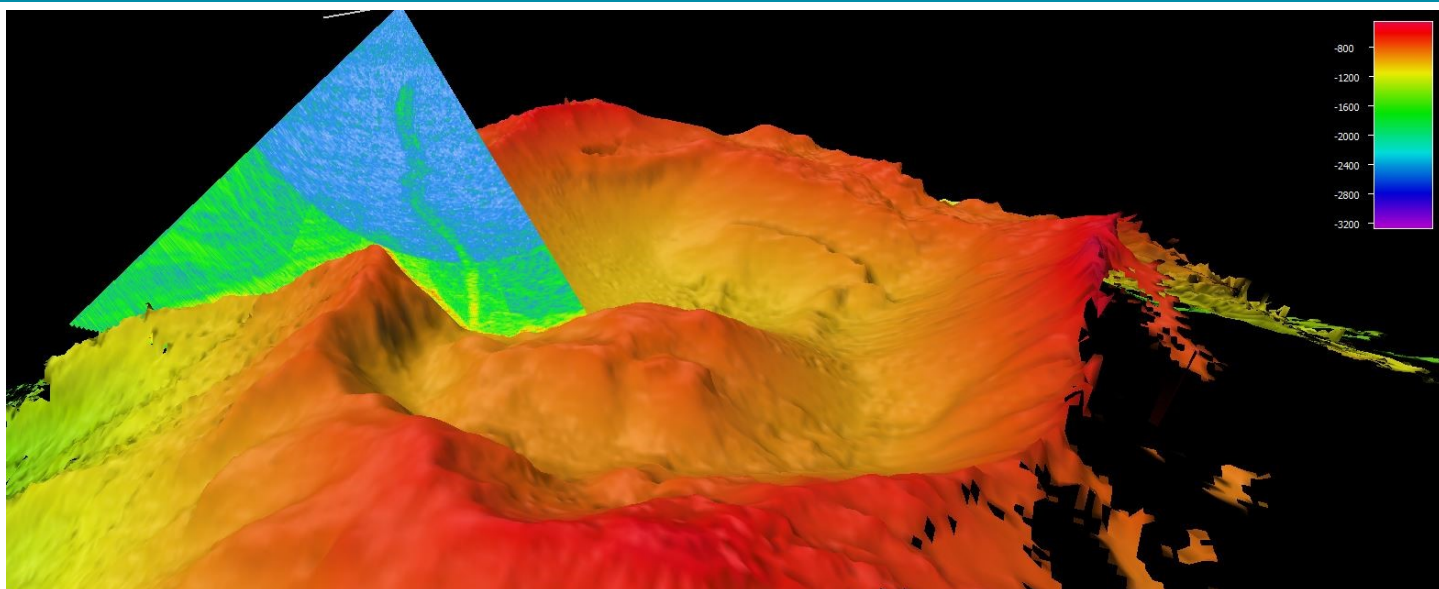


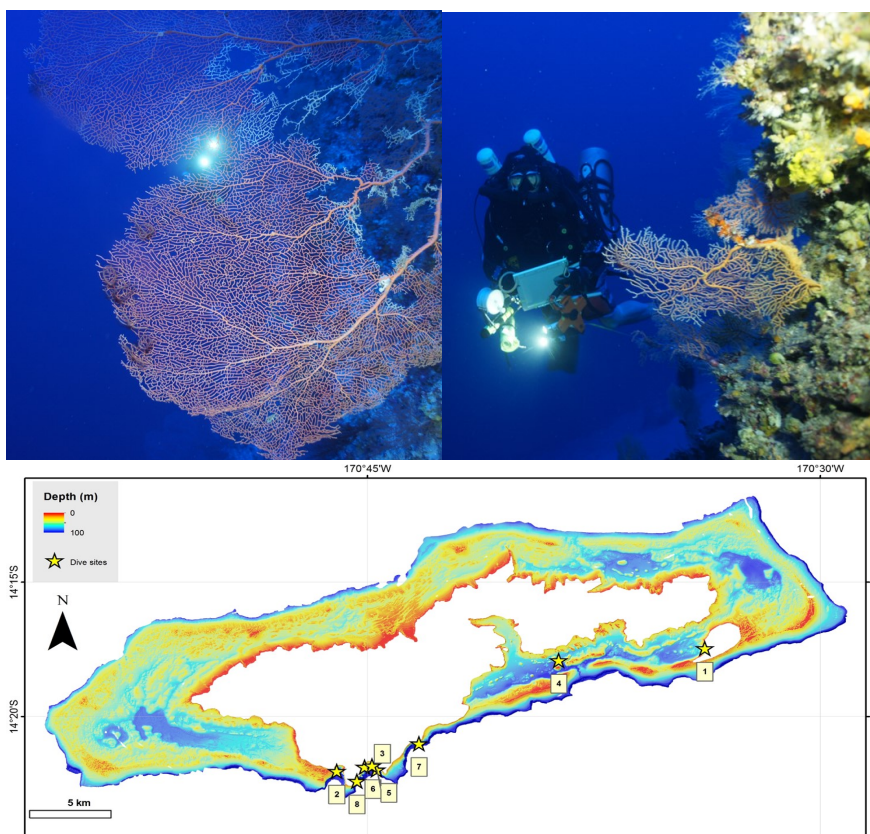
March 2017 Update



NOAA Okeanos Explorer Deep-sea exploration: Did you know that the NOAA research ship 'Okeanos Explorer' is conducting deep sea surveys from February—April 2017 around American Samoa? The ship deploys a remotely operated underwater vehicle (ROV) named "*Deep Discoverer*" that can dive thousands of feet deep. The project will increase knowledge of the poorly explored deep water habitats in American Samoa including deep areas of the sanctuary. The information will be shared with local resource managers and marine scientists. One of the ROV dive sites is Vailulu'u Seamount which has an active hydrothermal vent which supports thousands of cutthroat eels and bright red worms. The ROV dive of **Vailulu'u Seamount (above)** was streamed over live video feed held as an event at the Tauese P.F. Sunia Ocean Center on Friday, February 24th. **There will be a tour of the Okeanos Explorer on April 25th in Pago Pago Harbor.** Log on to <http://oceanexplorer.noaa.gov/okeanos/welcome.htm>

National Marine Sanctuary of American Samoa Deep Water Coral and Fish Survey Collaboration Project:

Did you know that from February 14-27, 2017 the National Marine Sanctuary of American Samoa team collaborated with fish and coral experts visiting from Pāpāhānaumokuākea Marine National Monument and National Centers for Coastal Ocean Science in South Carolina and Bishop Museum of Hawai'i? These specialized closed circuit rebreather (CCR) divers conducted fish and coral surveys at depths ranging from 250-330 feet as a follow-up to preliminary surveys conducted in 2015. The project will build a species inventory of the deep coral reef fauna of American Samoa, which will be shared with local resource managers and marine scientists. Due to the fact that deep coral reefs in American Samoa have not been extensively studied, the team found several species which have previously not been recorded in this area, including possible species which may be new to science. The team discussed their findings at a presentation open to the community on February 27th at the Tauese P.F. Sunia Ocean Center.



2016 Accomplishments

Sanctuary Summer Science in the Village

Sanctuary Summer Science in the Village (SSSV) was a two-week course, in the following sanctuary areas: Fagatele, Fagaluva/Fogama'a, Aunu'u and Ta'u. The program's purpose was to enhance youth understanding and appreciation of the marine environment. SSSV targeted students in grades 6-12 with an understanding of coral reef ecology, human impacts and ways to protect the marine ecosystem for future generations. The course motivated, encouraged, and challenged the youth to be better stewards of the ocean! 134 students participated, with a total of 150 people including parents, volunteers and teachers.

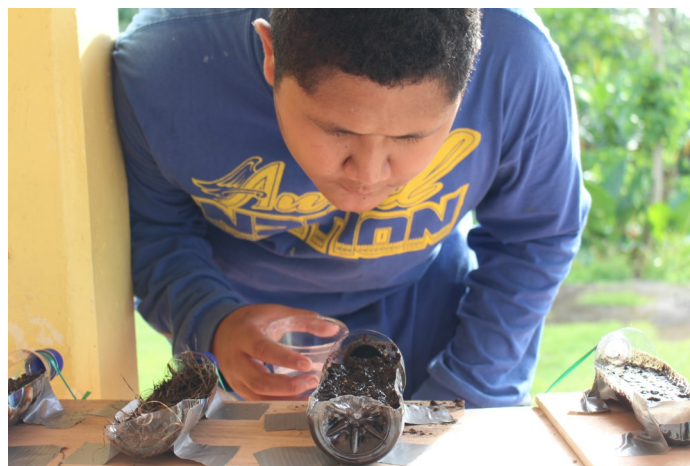
Students got to explore the dynamic earth processes and the impact of environmental events on a local or global scale. The village was the classroom, and the natural environment was the laboratory. Students learned through direct experience and observation within the surrounding sanctuary areas.

SSSV was designed to promote environmental and marine science through hands on activities (using house-hold materials or things found around the environment), collaborative learning, critical thinking and open discussions. Each day had a theme that allowed students to dive into science and understand how their everyday choices can make a difference for their future and future generations to come.



SSSV Marine Debris removal in Vaitogi

Photo: NOAA/NMSAS



SSSV student checking Soil erosion activity

Photo: NOAA/NMSAS

Tautai Fagota - Aloha Maid Fishing Derby

The sanctuary team and sponsor South Pacific Distributors/Aloha Maid held 4 fishing derbies on 3 islands in areas within and adjacent to the sanctuary. The events were part of a series of 2016 fishing derbies to encourage responsible ocean recreation activities and raise awareness about fishing in the sanctuary, particularly allowable non-destructive fishing practices. Fagatele Bay is the only sanctuary management area where fishing is not allowed. For many of the 200 students who participated, this was their first experience fishing. The events were the culmination of the Sanctuary Summer Science in the Village program that offered hands-on, science-based, learning opportunities for local students.



Photo: NOAA/NMSAS



Photo: NOAA/NMSAS



Photo: NOAA/NMSAS

Tautai Fagota fishing derby with SSSV students

2016 Accomplishments



Student Interpretive Guide Nicolina - Fogama'a Trail

Photo: NOAA/NMSAS



Student Interpretive Guide Program

The National Marine Sanctuary of American Samoa collaborated with public and private sector partners, National Park of American Samoa and Pago Pago Tradewinds Tours, to provide interpretive guide training for 12 high school students in American Samoa. In addition to interpretive training, the program afforded the students on-the-job training related to the service and tourism industries. To complete the training each student had to develop an interpretive program and lead their very own tour at the Get Into Your Sanctuary event held at Fogama'a on Saturday, June 25. Eight students successfully executed their tours and were awarded their certificates of completion.



Awarding certificates of completion for Student Interpretive Guides

Photo: NOAA/NMSAS



Photo: NOAA/NMSAS



Photo: XLCCM Seaview Survey

Climate Change Rapid Vulnerability Assessment Workshop of the National Marine Sanctuary and Territory of American Samoa:

NMSAS and the Sanctuary Advisory council sponsored a Rapid Vulnerability Assessment Workshop as part of a larger project intended to increase resilience and support adaptation for the region. The goal of the workshop was to assess the vulnerability of 8-10 focal resources (species, habitats, and ecosystem services) to climate change that were chosen based on participant input and then complete implementation strategies to address vulnerabilities. Eco-Adapt and Greater Farallones National Marine Sanctuary facilitated the workshop and were the lead trainers. The workshop was attended by 30 participants and technical experts of the National Park of American Samoa, NOAA Coral Reef Conservation Program, NOAA Pacific Islands Regional Office Protected Resources, American Samoa EPA, American Samoa Department of Marine and Wildlife Resources, Education and Outreach staff of NMSAS, the Governor's Coral Reef Advisory Group and village mayors.

2016 Accomplishments

Dive Safety Training & Drill

On May 25-26th, 2016 a second Dive Safety Training and Drill was conducted in Pago Pago Harbor in American Samoa. Coordinated by the National Marine Sanctuary of American Samoa and the Dive Safety Network (composed of private and public sector partners), this drill was designed to evaluate the response capabilities of area search, rescue, response and treatment protocols in the event that an actual SCUBA diving emergency occurs in AS. On the day prior to the drill, information on dive planning, gear set-up, dive physiology, and dive related illnesses were presented and practice stations were set up to reinforce this information. Over 50 participants attended.

This event targeted skill review for all participants, and provided a simulated drill to further enhance our collective ability for a cooperative emergency response in the territory.

Objectives of the Training and Drill in American Samoa: To enhance awareness, safety, and communications of marine and emergency professionals through a planned exercise. To facilitate that, we were grateful for the active participation from our dive safety network - consisting of Industrial Gas/Pago Pago Marine Charters, Sean & Valory Gregg (Atlantic Pacific Marine Inc.), UH Sea Grant, DPS Marine Patrol & Fire Departments, DMWR, LBJ Hospital, EMS, NOAA offices (NMFS Observer Program and NMSAS), United States Coast Guard, the Department of Interior/NPS/National Park of American Samoa, and a range of marine professional partners. We were also very fortunate to have had the presence of Sea Grant New



Photos: NOAA/NMSAS

York (David White) who added value to the week with "Clean and Safe Boating" practical programs and skills.

This effort met three primary goals as follows:

1. Demonstrated human and technological capabilities, integrating across programs for the common goal of protecting human life and coastal natural resources
2. Developed individual skills in program management, coordination, contingency planning, emergency response, health and safety
3. Built relationships across the public and private sector to foster long-term collaboration to protect the environment.

The Drill was a great success as it brought many operational issues to light that need to be addressed.



Photos: NOAA/NMSAS

2016 Accomplishments



Two local tugs getting ready to tow grounded vessel off reef.

Photo: NOAA/NMSAS

Removal of Grounded Vessel No.1 Ji Hyun from the reef offshore Aunu'u

In April the fishing vessel No. 1 Ji Hyun lost propulsion and stranded on the reef offshore of Aunu'u Island. The U.S. Coast Guard (USCG) coordinated the initial response including any fuel and hazardous material removal. After the pollution threat was removed, NMSAS lead the vessel removal efforts while USCG and Aunu'u village leaders provided technical expertise. After several attempts, No. 1 Ji Hyun was successfully removed on August 19, 2016. The vessel was towed into Pago Pago Harbor. The Office of National Marine Sanctuaries will assess for any potential damage to the coral reef and determine a feasible restoration plan. Efforts were led by Office of National Marine Sanctuaries, National Marine Sanctuary of American Samoa and United States Coast Guard in coordination with Aunu'u village leaders, National Park Service of American Samoa, Lt. Governor's Office, Port Administration, Department of Marine and Wildlife Resources, Department of Public Safety Marine Patrol, Lyndon B Johnson Tropical Medical Center-EMS, AS-EPA, AS-Power Authority, NOAA-Office of Law Enforcement, American Samoa Surf Adventures, Solar Inc., and Atlantic Pacific Marine Inc.

Hyperbaric Chamber Training

The sanctuary team participated in a hyperbaric chamber operations training led by David Cleary and hosted by Pago Pago Marine Charters. Colleagues from the National Park American Samoa, Department of Marine and Wildlife Resources and the Coral Reef Advisory Group also participated. Participants were given hands-on experience in chamber operations and discussed different scenarios and treatments.



Photos: NOAA/NMSAS

Boat & Swimming Training for Sanctuary Staff

The sanctuary team participated in a Boat & Swimming Training with Captain Peter Taliva'a of the NMSAS. The purpose of the training was to provide second in command training in case of an emergency, familiarize staff with the vessel, give them hands-on experience in using different knots, and practicing docking on both the port and starboard. Staff got practical exercises in being deckhands and experience with safety, search and rescue, and swimming techniques.



Joe, Iva and Gene securing bow and stern port side

Photos: NOAA/NMSAS

2016 Accomplishments

Virtual Experience: Connecting the Community to our Treasures

The sanctuary, in collaboration with Blue Sky communications brought the community closer to their special treasures than ever before. Sanctuary staff touched on topics about the importance of coral reefs to over 300 high school students and members of the community. This gave the sanctuary the opportunity to connect students and community to our underwater treasures. Students were very much engaged and amazed at the beautiful corals found in American Samoa. Some even said they've swum in these areas before, but never came to the realization that there is indeed another world in our ocean.



Fagaitua High School student

Photo: NOAA/NMSAS



Team Dorado - Yellowfin: 1st Place

Photo: NOAA/NMSAS

National Marine Sanctuary of American Samoa Buds & Suds Open Fishing Tournament

The sanctuary, in partnership with South Pacific Distributors Inc. (SOPAC) and Bud Light, hosted a first ever Open Fishing Tournament on December 2nd and 3rd, 2016. The rules of the tournament were tailored to benefit fishermen of 'alias (Samoan small boats) and recreational game fishing vessels. Seventeen boats registered which included both local 'alias and recreational fishing vessels. Although not limited to sanctuary waters, a major goal of the tournament was to better inform the fishing community that they are allowed to fish in sanctuary waters with the exception of Fagatele Bay.

Building Resilient Coastal Communities in the National Marine Sanctuary and American Samoa



Photo: NOAA/NMSAS

This workshop, hosted at the sanctuary Tauese P. F. Sunia Ocean Center, built off input provided by technical experts this past July and is part of an effort to work with local partners and the sanctuary advisory council to collaboratively develop and implement adaptation actions in response to, and in preparation for, climate change impacts on coastal and marine resources (species, habitats, ecosystem services). It also provided valuable information for future climate-related projects in American Samoa. Topics covered during the 2-Day workshop included: Coral Reef (flat, crest and slope), non-commercial and commercial reef fish, giant clams, mangroves, lagoons, water quality, turtles, sharks, rays and pelagic fish. The workshop served several purposes including (1) providing an overview of projected climate changes for the National Marine Sanctuary and American Samoa and adaptation planning; (2) a review of the habitat vulnerability assessments developed with input from local experts; (3) evaluation and revision of current management goals and actions given vulnerabilities of the selected focal resources; (4) generation of new climate-smart management actions designed to reduce vulnerabilities or increase resilience of habitats, species, species assemblages, and ecosystem services; and (5) an initial prioritization of climate-smart management actions including where and how to implement. Tau ina uia ala o le atu – Let it go the way of the bonito!